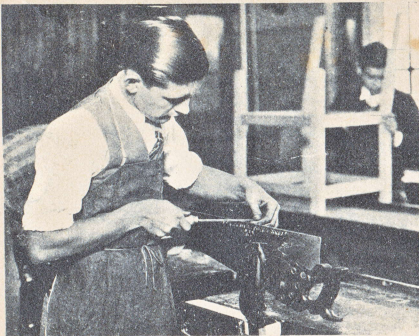


# FILE CHART



**Filing a Hand Saw**

Place saw in the clamp so that the teeth are about  $\frac{3}{8}$  of an inch above the jaws. Start a file cutting at the point, as shown in illustration. Raise the file on the return stroke. File every other tooth, then reverse saw in the clamp and file remaining teeth.

To file 6-, 7-, and 8-point saws for cross-cutting, use 6-inch taper file.

To file 9-, 10-, and 11-point saws, use  $5\frac{1}{2}$ -inch slim taper files.

To file 6- and 7-point saws for ripping, use  $4\frac{1}{2}$ -inch regular taper file.

To file back saws, use  $4\frac{1}{2}$ -inch extra-slim taper.

## Single-Cut Files in General Use

**TAPER FILES**—Tapered in length, triangular in cross-section with cut edges. Used chiefly for hand-saw filing. Available in regular, slim, and extra-slim size and double-extra slim.

**BLUNT HAND-SAW FILE**—In addition to this type, hand-saw files are made without tang for machine filing in light or heavy cross-section.

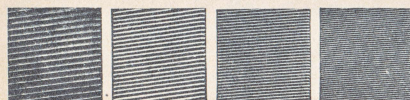
**MILL FILES**—Tapered in width and thickness; also made blunt. For filing circular saws, joiner and planer knives; for lathe work, or any flat, smooth cut. Made also with one or both edges rounded.

**ROUND FILES**—Tapered; also made blunt. Single cut to 8" length. If longer, are double cut. Used for enlarging holes, gumming circular saws, etc.

**AUGER BIT FILE**—For dressing bits of augers. Triangular and flat ends.

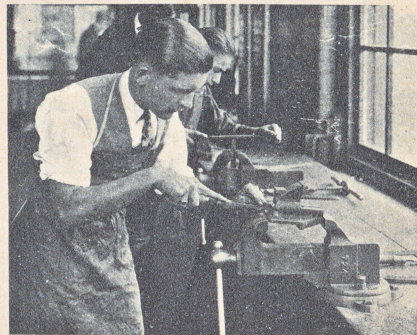
**PERFECTION SHEAR TOOTH**—Teeth coarser and designed for quick work and self-cleaning. For soft steel, iron, brass, wood, marble.

### Spacings of Teeth for Single-Cut Files



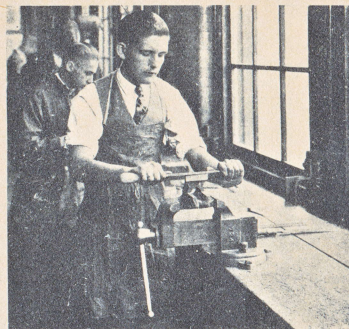
Rough Bastard Second-cut Smooth

**SINGLE-CUT FILES** have one course of chisel cuts diagonally across their surface. Single-cut files are distinguished for their smoothness of cut.



**Cutting a Key-Way**

When the file is controlled mostly with one hand, it should be held as shown above. The index finger guides the direction of the file. This also is the position for sharpening most edge tools. Note in the illustration how the operator is using his left hand to guide the file in the cut.



**Draw Filing—a Finish Cut for Flatness**

The illustration shows proper position and method of holding file for this kind of work.

## HOW TO ORDER A FILE

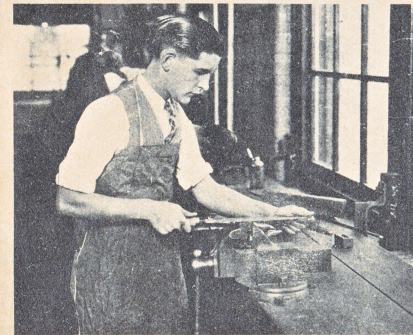
Give definite information as to name, cut, and length

The following information will assist you in ordering:

**NAME:** Files have descriptive names based on their outline or shape (as taper), their cross-section (as round), or their use (as auger bit).

**CUT:** This means spacing between teeth. Most common spacings are shown at bottom of left and right columns of this chart.

**LENGTH:** Does not include length of tang. Metal-cutting files are used mostly in 6-, 7-, 8-, 10-, and 12-inch lengths.



**Bench Filing with Flat File**

Proper position is with left hand at point, thumb on top of file; right hand at handle of file, thumb on top, as shown. For fast cutting, rest ball of left hand on file. Work should be on line with elbows. Use full-length stroke of file.

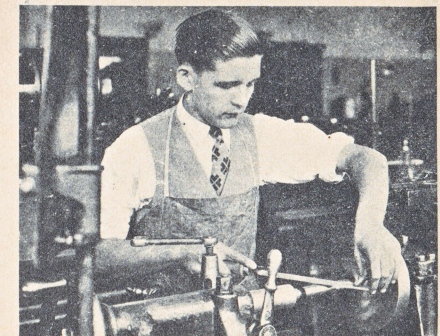


**Cleaning a File with File Card and Brush**

Keep file teeth free of chips and filings. This will save time and energy and result in better work. Do not attempt to clean files by knocking them against bench or work. To get best results from files, keep them clean; but clean them properly by use of file card and brush.

## Other Pointers on Use of Files

Hold file in contact with work during cutting. Allowing file to slip quickly dulls it. Oil files before putting them away for any length of time, and put them in a dry place. It pays to rub a new file on a piece of soft wood or on chalk before using. Start a file cutting at the point and follow through with the full stroke of the file. It is generally known, but worth repeating, that a file cannot be used for a hammer, a pinch bar for prying, or a grinding wheel.



**Filing in Lathe with Mill File**

Turn file about 30° toward head stock of lathe. This position advances file across the work, keeps teeth free of chips, and gives smooth cut.

A short stroke is used for filing lathe work and the file should be raised slightly on the return stroke.

For rapid removal of material, double-cut files of the hand type are generally used.

For smooth, or finish cuts, use single-cut files of mill type.

Diston "new angle lathe file" is a double-cut file designed to combine fast cutting and smooth finish and is popular for lathe filing.

## Double-Cut Files in General Use

**HAND FILE**—Parallel in width, tapered in thickness. One edge cut, one blank (or safe). Machinists and mechanics use for finishing flat surfaces.

**FLAT FILE**—Tapered in width and thickness. Double-cut on faces, single-cut on edge. One of most widely used files.

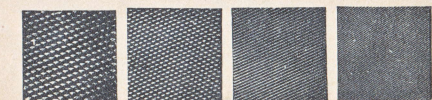
**HALF ROUND**—One side arced, tapered in length and thickness. Very useful for general work.

**SQUARE FILE**—Generally tapered; also made blunt. For dressing out corners, or enlarging square holes.

**PILLAR FILE**—Slightly tapered in thickness. Resemble hand files in shape, but narrower and thicker. Used in slotting, grooving, keying.

**WARDING FILE**—Tapered in width—unusually thin. For slotting.

### Spacings of Teeth for Double-Cut Files



Rough Bastard Second-cut Smooth

**"DOUBLE-CUT" FILES** have two courses of teeth, the first or "over-cut," and the second or "upcut." Used for fast metal cutting, on bench and in general work.

## HENRY DISSTON & SONS, INC.

SAWS, TOOLS, AND FILES, MACHINE KNIVES, AND STEEL

Educational Department

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